

Application No.: 10/722,341

Docket No.: 102314-0157

REMARKS

This reply is in response to the Office Action, dated September 20, 2005, rejecting claims 2-11, 14, 16, 19, 21, 22, 25, 27, 28, and 31-34 and objecting to claims 12-13, 15, 17-18, 20, 23-24, 26, 29-30, and 35. Applicant would like to thank the Examiner for the indication of allowable subject matter.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 2-11, 14, 16, 19, 21-22, 25, 27-28, and 31-34 stands rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,204,669 to Dorfe et al. ("Dorfe") in view of U.S. Patent No. 5,802,389 to McNutt ("McNutt").

Claim 2 is directed to a control system comprising a plurality of field devices, at least a selected one of which provides a second control function within the control system, including controlling one or more devices. The system further comprises a computing device which provides a first control function within the control system, where the first control function includes controlling at least the selected field device. The computing device includes a control subsystem which comprises a bus and plurality of modules that are coupled to the bus and which each comprise a housing. At least a first module of the control subsystem comprises a controller; at least a second module interfaces one or more of the field devices; and at least a third module interfaces to the field device that provides the second control function.

Independent claims 3, 7, 11, 16, 21, and 27 similarly require at least first and second control devices, at least one of the control devices comprising a bus, a control processor coupled to the bus, a plurality of modules at least one of which is adapted to serve as an interface to a field device and at least one of which is adapted to interface a device that including a control function.

The Dorfe Reference

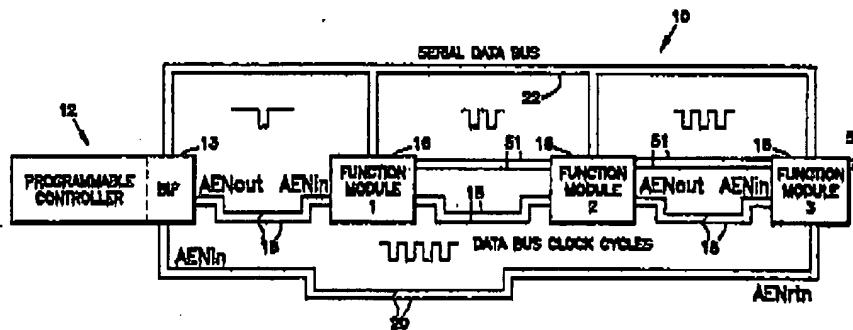
Dorfe purports to teach a system for dynamically assigning addresses to a plurality of function modules. The function modules communicate with a programmable controller, which assigns the addresses, over a data bus.

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At the outset, it is debatable whether the dynamic addressing of the programmable controller in Dorfe is controlling the function modules. Consequentially, it is debatable whether Dorfe teaches a field device providing a second control function for controlling one or more devices, or a computing device providing a first control function for controlling such a field device.

Even assuming, for the sake of argument, that Dorfe's dynamic addressing constitutes "control," there is no mention of a further level of control beyond the function modules. For example, FIG. 1 of Dorfe shows the programmable controller 12 and the function modules 16, however neither the programmable controller nor the function modules controls anything else.



Hence, Dorfe does not teach or suggest a first control device controlling a field device, where the field device provides a second control function within the control system, where the second control function includes controlling one or more devices, as recited in claim 2.

The Examiner admits that "Dorfe et al. do not specifically disclose the function module comprising at least the plurality of field device coupled to the function module." Thus, Dorfe lacks not only *field devices*, but the presence of at least one field device providing *a second control function* within the control system, the second control function including controlling one or more devices. To remedy this deficiency, the Examiner cites McNutt. However, Applicant believes that even if Dorfe and McNutt could be combined, they would fail to teach the claimed limitations.

The McNutt Reference

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McNutt fails to remedy the deficiencies of Dorfe, specifically that McNutt does not teach or suggest a system with layers of control as discussed above, e.g., where a computing device controls at least one field device which further controls one or more devices.

McNutt discloses a system and method for addressing expansion modules in communication with a base control unit. FIG. 1 illustrates Programmable Logic Controller system comprised of a base unit (CPU) which cooperates with expansion input-output modules (24). The system allows for the addition of extra modules as needed. However, the input-output modules do not have secondary control functions that allow the modules to control field devices.

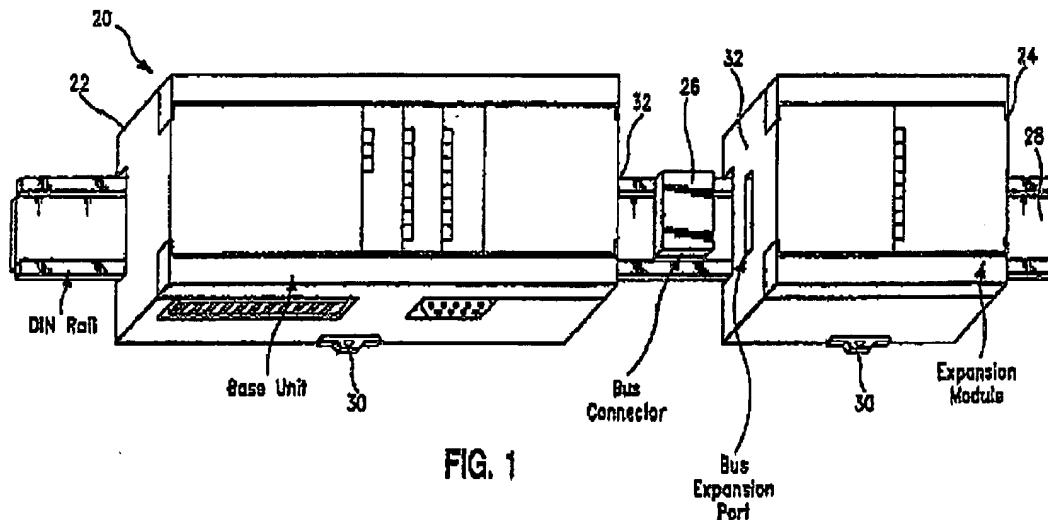


FIG. 1

In an attempt to meet the claimed limitations of a field device providing a second control function within the control system (where the second control function includes controlling one or more devices), the Examiner argues that reference numbers 42 (a communication port) and 44 (an input connector) disclose field devices. However, communication ports/inputs are not field devices and instead merely allow for communication with the base unit (22). It is the base unit (22) which provides the control function in McNutt's system. Thus, McNutt lacks a system with layers of control as required by the claims, e.g., where a computing device controls at least one field device which further controls one or more device.

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The Combination of Dorfe and McNutt

As discussed above, neither Dorfe nor McNutt disclose a first control device controlling a field device, where the field device provides a second control function within the control system, where the second control function includes controlling one or more devices. Thus, the combination of Dorfe and McNutt fails to render obvious independent claims 2, 3, 7, 11, 16, 21, or 27.

In addition, claims 3, 11, 16, and 21 further require a computing device adapted to download programs and data to one of the control devices. Both Dorfe and McNutt fail to disclose a system as required by claims 3, 11, 16, and 21 in which a computing device downloads programs and data to a control device. Thus, in addition to the reasons discussed above, Dorfe and McNutt cannot render obvious independent claims 3, 11, 16, or 21.

Independent claims 7 and 27 require first, second, and *third* control devices, a limitation not taught or disclosed by Dorfe or McNutt. Accordingly, in addition to the reasons discussed above, the combination of Dorfe and McNutt cannot render claims 7 or 27 obvious.

Conclusion

In view of the above amendments and remarks, Applicant believes the pending application is in condition for allowance.

Dated:

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